

WHAT IS CLAIMED IS:

1. A liquid crystal panel, comprising:

a front plate;

a rear plate including a plurality of pixel electrodes, wherein the pixel
5 electrodes are grouped in pairs, every two pairs of the pixel electrodes are
separated by a groove, and the pixel electrodes of each pair of the pixel
electrodes are separated by a protrusion; and

a liquid crystal layer, with which the space between the front plate and
rear plate is filled, wherein the liquid crystal layer has liquid crystal molecules
10 in vertical alignment mode.

2. The liquid crystal panel according to claim 1, wherein the protrusion
is made of dielectric material of low dielectric constant.

3. The liquid crystal panel according to claim 2, wherein the protrusion
has a dielectric constant of smaller than 10.

15 4. The liquid crystal panel according to claim 2, wherein the protrusion
is made of silicon dioxide.

5. The liquid crystal panel according to claim 1, wherein the front plate
and the second plate are apart in a cell gap and the protrusion has a height of
at least one fifth of the cell gap.

6. The liquid crystal panel according to claim 1, wherein the groove has a first inclination and a second inclination, and the first inclination is opposite to the second inclination.

5 7. The liquid crystal panel according to claim 1, wherein the protrusions and the grooves are arranged alternately.

8. The liquid crystal panel according to claim 1, wherein the groove has a depth equal to that of the pixel electrodes.

10 9. The liquid crystal panel according to claim 1, wherein the rear plate further comprises an insulating layer, the pixel electrodes are disposed above the insulating layer, and the groove has a depth larger than that of the pixel electrodes.

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